

Abstract

A new architecture for deploying network management and service provisioning solutions is provided. The new architecture includes the provision of a framework implementing a software development methodology for coding complex software applications relating to network management and service provisioning. The software development methodology results in software application code that is easy to: understand, debug, extend, test, and deploy while still being efficient when used in real time. The methodology includes the coding, compiling and linking of a single managed object class. The managed object class is used to model and represent different data network entities in accordance with attributes held therein. The methodology further makes use of a network management and service provisioning specific grammar used by a parser associated with the framework to read a body of attribute files associated with the data network entities. The interpretation of the contents of the attribute files is performed by hierarchical lexical analyzer which when encountering an enabling technology specific directive, the directive is interpreted by a corresponding enabling technology specific lexical analyzer stub. Provisions are made for the run-time definition of methods implementing polymorphic characteristics although using a statically typed implementation. The advantages provided by the software development methodology are derived from application code that is easy to: understand, debug, extend, test, and deploy while still being efficient when used in real time.